



INTRODUCTION

'We are accustomed to think of myths as the opposite of science. But in fact they are a central part of it: the part that decides its significance in our lives. So we very much need to understand them.' (Midgley 2004, 1)

0.1. WHAT IS COMPREHENSIVE SCIENTISM?

What is *Comprehensive Scientism* (CS)¹ and what philosophical currents and ideas have paved the way for it? How was and is CS justified and theoretically formulated? How did the once unquestionably valid and, from the point of view of almost all philosophers, well-founded assumption of the existence of a God as a world originator or a transcendent cause of the world be contested with scientific reasons? Which theological, philosophical and scientific constellations gave rise to scientism? These questions define the subject of my research.

The triumphant success of empirical science over the last centuries easily leads many people to an overconfidence and quasi-religious belief in the power of science. This overconfidence in science lies at the origin of every form of scientism, which appears in a number of variations. On the one hand, there are forms of scientism that can be described as a systematic thesis, which are largely coherent. In this thesis, I distinguish between epistemological, ontological, moral and existential scientism. On the other hand, CS – the most extreme form of scientism – is a combination of all four forms of scientism in one comprehensive theory. It is strongly influenced by the background knowledge of an atheistic worldview. Radnizky summarizes the essence of CS when he says that this 'is roughly the view that *science has no boundaries*, ie that eventually it will answer all theoretical questions and provide solutions for all our practical problems.' (Radnizky 1978, 1008) CS has, to a considerable degree, become the philosophy that guides the moral and spiritual values of educated persons today. (Williams 2015, 16) However, if CS were true, it would have

¹ The term 'Comprehensive Scientism' was coined the first time by Mikael Stenmark in his article 'What is Scientism?' in 1997. (Stenmark 2020) Stenmark is currently a Professor in Philosophy of Religion. His research focuses on how to think about the relationship between science and religion (or faith and reason) as well as the relationship between Christians and Muslims. In his research, he has also explored different conceptions of God, human nature, and of the natural world. (Stenmark 2021)

devastating epistemological, ontological, moral and existential consequences. Many faculties, especially the Humanities, could offer only illusionary knowledge and would need to be closed. Many intuitive moral truths and traditional existential questions would have no meaning at all.

I shall argue that CS is not only a thesis that tries to objectively search for the truth of reality, avoiding any form of arbitrariness, but also a worldview that primarily aligns itself to atheism. CS has its origin and main characteristic in the verdict-like exclusion of theism, from which it tacitly and incessantly nourishes itself.

0.2. INTERESTS AND OBJECTIVES OF THIS THESIS

According to this thesis, CS is the sum of epistemological, ontological, moral and existential scientism. These four building blocks of CS can be individually analysed in a systematic way. Especially when those different forms of scientism are read in conjunction, logically incoherent relations can be detected. The conceptual map of scientism, which enumerates not only the different forms of scientism but also highlights their coherent relation amongst each other, will be applied to the publications of scientisers². Emerging incoherence amongst these arguments indicates that they might be driven by their presumption of a worldview. Therefore, it is not enough to draw upon a conceptual map of scientism alone; indeed, the scientiser's existential circumstances, such as biographical, sociological or historical aspects, need to be involved as well in order to understand CS's ideological drive. CS cannot be studied in a metaphysically abstract vacuum but needs to involve the 'Sitz im Leben' – the 'setting' of the theory in everyday life. In this thesis, I intend to identify the presuppositions of CS and the main reasons that promote its worldview.

As a result of the lack of systematic discussion of scientism over many centuries, popular scientisers, whose publications had a profound impact on society, were completely ignored by academic philosophers. Scientisers are often dismissed as amateurish and dilettante philosophers, who merely propagate ideologies. An important reason for a lack of analytic examination of scientism lies in the fact that scientisers and materialistic *philosophes* of the 18th century French Enlightenment – the early proponents of CS – were, and are,

² Although the term 'scientiser' cannot be found in the Oxford English Dictionary, it is a term we find, for example, in Stenmark's article 'Scientism and Its Rivals.' (2018, 59. 73) Therefore, I will also use this term, as there is no official personal noun for a follower of scientism.

scientists or ‘men of letters, writers of books intended to be read and designed to spread abroad new ideas or to shed new light on old ones.’ (Becker 1932, 35) Denis Diderot (1713-1784) and many other philosophers of his time like Benjamin Franklin (1706-1790), Anne Robert Jacques Turgot (1727-1781), François Quesnay (1694-1774) or Marquis de Condorcet (1743-1794), to mention only the most celebrated, were not professors of philosophy ‘whose business it was to publish, every so often, systematic and stillborn treatises on epistemology and the like subjects’. (ibidem) Diderot, for example, was a literary editor and promoter of the *Encyclopédie*. He was a journalist who wrote on everything that struck his fancy – on art, the social implications of a mechanistic theory of the universe or the baneful effect of emotional repression on nuns. Similarly, Franklin was a scientist, inventor, politician, diplomat, political economist, moralist, and the first and most successful of American ‘columnists’. (36) Due to their unsystematic style of writing and arguing, an academic philosopher might get the impression that an argumentative discussion would initially amount to a number of gruelling, but not very fruitful, debates about historically applied questions.

For many philosophers, the foreseeable expense of such prior corrections seems to be out of proportion to the intellectual gain that a serious examination of scientism promises. CS in particular seems to be working with variants of a few well-known arguments, to which the respective counterargument is obvious. (Löffler 2010, 22-26) Furthermore, popular philosophers are often viewed with suspicion because their bestselling books are interpreted as a ‘service industry competing for customers’ wherein ‘philosophy is becoming an item of conspicuous consumption designed to flatter users’ intellectual self-images.’ (Jeffries 2017, 72) Some academic philosophers even claim ‘that the masses cannot and should not read philosophy’ (75); probably because they fear to lose sight of the truth or because of their archetypal picture of a philosopher, whose intellectual discipline is practiced in a hermit-like way. In my point of view, philosophy should come down from the ivory tower of incomprehensible language of experts in order to remain relevant within a media society. I think it is crucial that there is scientific research at philosophical faculties; however, historical philosophy often tends to lose reference to the present while analytical philosophy is often in danger of ignoring its object of reference. Due to the highly specific investigations, there is a risk of losing the balance between theory and practice. Albert Schweitzer (1875-1965) once told his fellow philosopher Ernst Cassirer (1874-1945) ‘that their colleagues must address what most concerned everyone, in a style that is not only

accessible to an educational elite. This he believed, was essential.’ (ibidem) Friedrich Nietzsche (1844-1900) claimed that it is the duty of a philosopher ‘to improve with the most ruthless bravery the one side of the world, which he recognised to be changeable.’³ (Nietzsche 1999, WB 3, KSA 1, 445) Scientisers’ publications correspond largely to those requirements. Their philosophical writings and ideas were and are hugely influential. They changed Western societies’ values (see figure 2a) and worldviews more than most academic philosophers’ publications. Democratic republican revolutionary ideals, universal and equal human rights, the critique against organised religion and the importance and influence of science are ‘derived not from general cultural shifts, or mainstream culture, but overwhelmingly from the still basically fringe source and intellectual traditions’ (Israel 2019, 19) of such popular philosophers and men of letters.

That said, in this thesis I would like to put an end to the discrepancy between influential and popular philosophical writings and their systematic, academic examination. CS is the mainstream worldview of educated persons in the Western hemisphere and I believe it is the duty of academic philosophy to try to understand in more detail those influential thought patterns. For this endeavour I will concentrate on the publications of Baron Paul-Henri Thiry d’Holbach (1723-1789) – probably the first scientiser in history – and on one of the most current and famous scientisers – Clinton Richard Dawkins (1941-). If academic philosophers do not recognize these authors as philosophers, at least their philosophical message should be recognised due to their enormous impact on society, as will be shown in section 0.3. This thesis puts popular and influential scientisers at the forefront by systematically examining their worldviews, which are made up of different specific theses and statements.

³ ‘...mit der rücksichtslosesten Tapferkeit auf die Verbesserung der als veränderlich erkannten Seite der Welt loszugehen.’

0.3. THE CURRENT STATE OF RESEARCH ON SCIENTISM

In the second half of the 19th century, the term ‘scientism’ emerged for the first time⁴ and was associated with the arrogance of scientists and the discrepancy between scientific facts and their unscientific interpretations. (OED - Oxford English Dictionary, 583-585) Until some decades ago, only a few, like the biologist Félix le Dantec (1869-1917), understood the term ‘scientism’ in a positive way and even described themselves as adherents of scientism. (Schöttler 2012, 253) However, today, there is a growing number of philosophers of science, for instance, Alex Rosenberg (2001), Don Ross (2007), David Spurrett (2007), John Collier (2007) or James Ladyman (2007), who consciously present themselves as advocates of scientism. (Peels 2019, 274) According to Ladyman, for example, there are no domains of inquiry that are off limits for science; he claims that the ‘scientific culture and its methods are supremely reliable and self-correcting.’ (Ladyman 2018, 113) Furthermore, he claims that many of today’s philosophical discussions ‘are uninformed by and even incompatible with what science is telling us.’ (121)

As a reaction to the growing number of self-proclaimed scientisers, the systematic, philosophical analysis of scientism is actually a quite recent phenomenon that started at the end of the 20th century. What was lacking in the discussions about scientism in general until the publications of Stenmark (1997) was a careful and systematic evaluation by professional philosophers. Stenmark described scientism not in a pejorative way to indicate automatically an improper use of science, but more as a *claim* or *thesis*. (Stenmark 2018, 59) Stenmark’s work helped us to understand scientism as a serious philosophical position and to judge it in a benevolent and fair manner, without excluding criticism. Besides Stenmark, there are also other philosophers who have recently sought to provide a definition

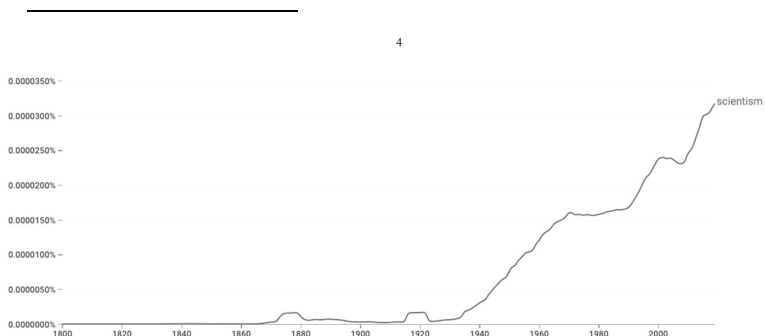


figure 1: Percentage of English books containing the term “‘scientism’, 1800-2019
(Google Books Ngram Viewer)

of scientism and partly developed and refined Stenmark's conceptual map of scientism. (van Woudenberg, Peels and de Ridder 2018; Haack 2012; Williams and Robinson 2015) There are two main reasons why scientism can be understood as a coherent logical thesis and not only as a kind of attitude, affection, stance or worldview. First, 'scientism as a thesis is frequently found in the writings of scientists and philosophers' and second, 'it seems that every attitude, affection or stance, at least if it is to be up to discussion, can be translated into a thesis, namely, the thesis that it is *good* to have that affection, attitude or stance.' (Peels 2018, 29 – original emphasis) While Stenmark has a more theoretical approach to scientism because he understands it as a serious philosophical position, there is a second group of philosophers who 'have adopted the strategy of focusing on a specific topic or set of claims about some aspects of science, and, as it were, let a conception of scientism emerge from it.' (Beale 2014, 2) This second approach is less systematic than the former one and does not make any claim to be exhaustive. Whilst Mary Midgley (1919-2018), for example, protests against the reductionist approach of scientisers with regard to the phenomenon of human and animal life (see, for example, Midgley 2006), Peter Michael Stephan and Max Richard Bennet criticise the reductionist idea of certain neuroscientists with regard to the human mind (see, for example, Bennett and Hacker 2003). Finally, there is a third group of people who claim that scientism 'escapes self-referential incoherence because it is not itself a belief, but rather a stance' (van Woudenberg 2018, 18). This approach to scientism does not search after a systematic treatment but understands scientism more as a kind of attitude or conviction – a form of worldview. This is, for example, the way James Ladyman (Ladyman 2011), Jonathan Beale or Ian James Kidd (Beale 2014) understand scientism.

While there has been an increasing number of extensive and detailed analyses of scientism in general in recent years, there is little analytical literature on specific scientisers' philosophies and works. The philosopher Michel Onfray complains about the analytical literature on d'Holbach that

...the work of Baron d'Holbach cannot be found in the university: no scholarly or scientific edition by any philosophical publisher worthy of the name; no works, theses, or ongoing research; no paperback edition, of course (whereas editions of Rousseau, Voltaire, Kant, or Montesquieu abound); no classes or seminars devoted to analytic examination [...] of his thinking, not one biography [...] Painful! (Onfray 2005, 30)

The same could be said about Dawkins's work. There are some rare articles and books about scientism in which Dawkins is mentioned as one of its figureheads (see, for example, Midgley 2006, 77; 1979; McGrath 2015, 80), however, there is no extensive systematic

investigation on either of the authors' scientism until today. d'Holbach, as far as I know, has never been associated directly with scientism, probably also because the term 'scientism' started to exist only about a century after his death. On the one hand, scientism seems to be the best categorisation and point of investigation in order to understand these two authors. On the other hand, the investigation of these authors will also help to understand the characteristics of CS and its *Sitz im Leben*.

0.4. ARCHETYPES OF COMPREHENSIVE SCIENTISM: D'HOLBACH AND DAWKINS

The following criteria were decisive for me in choosing d'Holbach as an ideal representative of CS: first, d'Holbach was not only himself a scientist and a distinguished expert and connoisseur of chemistry, metallurgy, mineralogy and geology, but also one of the first promoters of applied science and an onlooker at the birth of the modern positive sciences (see, for example, Cristani 2003, 1-6; Wickwar 1935, 47-50; Topazio 1967, 64-65; Guerlac 1977, 73-78). The second reason is that d'Holbach is frequently listed as the first self-proclaimed atheist against ambiguous figures like Spinoza or Hume. Whilst we can already find in the Bible the idea of atheism when we look at Psalm 14:1 'אין אֱלֹהִים' ('There is no God'), it is difficult to find a historically verifiable person before d'Holbach who claimed to be an atheist himself (see, for example, Buckley 1987, 32; LeDrew 2016, 18; Stephen 2015, 25; Schröder 2012, 87; Yunis 1988, 36). Thirdly, his publications are relatively unknown and understudied despite the extraordinary popularity of his scientific and atheistic work at the time of publication.⁵ d'Holbach's influence on the Enlightenment⁶ became unjustly forgotten by all but a few specialised scholars. (Cushing 1914;

⁵ Topazio enumerates four reasons for his success: 1. The greater facilities for having books printed abroad at the end of the Seven Year's War in 1763; 2. Voltaire's success in marshalling public opinion against intolerance; 3. The expulsion of the Jesuit persecutors in the early sixties; 4. The relaxation of governmental censorship under Choiseul and his colleagues who were more sympathetic to the 'philosophes' movement. (Topazio 1956, 20)

⁶ The concept of the Enlightenment and its different strands is a historical meta-narrative, which is an artefact of our cultural Western heritage. What this meta-narrative had sought to do was not to impose reason upon the unruly human personality but to create the impossible concept of a universal human identity, a universal human destiny, what Jean-François Lyotard – the man who first coined the term *postmodernism* – called the 'cosmopolitical' (Lyotard 1985, xiii). According to this narrative, the Enlightenment was an intellectual movement centred in Western and Central Europe during the late 17th and 18th century, which was largely responsible in establishing modern convictions concerning the virtues of representative government, religious toleration, human rights and many other alleged core values of the western world. Historical meta-narratives are 'constrained by the facts, since they are constructed from verifiable statements. They are subject to objective evaluation because [...] narrative forms in history must function as methodological paradigms. Paradigms, in the methodological sense, provide problem-solving models and, as a consequence, function to direct research. Narrative forms can then, be judged relative to their fruitfulness in guiding research and their resources for solving problems. [...] Narrative explanations, as is to be expected, are underdetermined by their evidence; agreement on the evidence still allows for the construction of logically

Wickwar 1935; Topazio 1956; Naville 1967; Belgrado 1983; Di Domenico 1994; Cristani 2003; Sandrier 2004) Behind the scenes, d'Holbach's philosophical ideas became a crucial resource for the French Revolution, which shows the influence of his writings on the society of his time.⁷ Fourth, because his writings, especially his *Système de la Nature* (1770), cover all important arrays of topics central to CS, and eminently contradictory, serve as a prime example of the 'assembled' nature of this form of scientism. He is thus an ideal representative of one of the first, if not the first follower of CS, of whom we have historical knowledge.

With regard to the choice of materials, we already have a collation, arrangement and some translations of primary sources of d'Holbach's writings. Researchers have tried to define the limits of the corpus of d'Holbach, which is a difficult task, given the unfortunate but understandable habit of the *baron* of not signing anything, but also due to the censoring of religion-critical writings and anti-absolutist ideas. Moreover, the fact that d'Holbach did not work in isolation complicated the situation. We know from various sources that Diderot and Jacques-André Naigeon (1738-1810) took great pains to whiten the 'dirty rags' of the baron before printing. Furthermore, one cannot dissociate d'Holbach from the society of men who met at his house, the 'coterie holbachique'. Therefore, I relied on the *Catalogue des Livres de la Bibliothèque de Feü M. le Baron d'Holbach* (1789) published by De Bure the Elder, which lists all the books of the private library of

incompatible histories.' (Roth 1988, 12) Differences in historical explanations are not necessarily differences over matters of fact but disagreements concerning modes of employment. Due to the fact that events are not natural entities, they exist only under a description. The varying ways of individuating events are not always mutually consistent. This essential incompleteness explains why there are so many different views on the Enlightenment. The historical narrative can go so far to even deny the existence of the Enlightenment itself, as Daniel von Wachter suggests. (Wachter 2017) von Wachter criticises that the notion of time periods such as the 'Renaissance', 'Modernity' or the 'Enlightenment' suggests a unity of opinion that does not exist. There are no ages, but always different people with largely different opinions. (p. 13-14) Although I think, that history is neither a fictional discipline nor natural science, it will always remain a study which depends on antecedent research and will always be partial, even selecting single persons in history. Therefore, I chose the option to select two persons who very much identified themselves with the Western worldview of this period. This will make it easier to provide an ever-clearer picture of things as they actually are. Finally, it needs to be recognized, that even if something like the 'Enlightenment' would never have existed, it is for sure that its historical narrative exists in nowadays popular culture and in thousands of books. As Pagden writes: 'The belief in the Enlightenment was concerned with subjecting every aspect of human life to reason is not, of course, entirely groundless. Had this been so such a belief would hardly have endured for so long.' (Pagden 2013, 16)

⁷ Curran describes the popular success of d'Holbach's books and their wide distribution: 'Between 1766 and 1773, employing Marc-Michel Rey's Amsterdam presses, d'Holbach flooded the market with an unprecedented campaign of twenty-eight works of anti-clerical and atheistic propaganda. [...] Voltaire and the baron d'Holbach, touted as pre-revolutionary best-sellers, sold phenomenally well during the 1770s [...] D'Holbach's *Histoire critique de Jésus-Christ*, for example, comes 18th on his master table, registering total demand of 327 copies in 36 orders and the full gamut of catalogue appearances and police and customs confiscations. Darnton's genre-specific tables show it to have been the second best-selling pre-revolutionary anti-religious treatise.' (M. Curran 2013, 110)

d'Holbach, on the *Bibliographie descriptive des imprimés du baron d' Holbach* (2017) of Jeroom Vercruysse, which lists all books allegedly written or translated by d'Holbach, and on the *Textkritische Studien zum Werk Holbachs* (1969) of Rudolf Besthorn. For this thesis, I consulted several writings of d'Holbach; however, my main focus lies on his major work, *Système de la Nature* (SN), which covers all important topics of this treatise. As a note, I have always consulted the first editions of his publications.

First, I appeal to Dawkins for four reasons: First, Dawkins is himself a famous ethologist and evolutionary biologist who is a fervent propagator of science. He was the first who hold the chair of the Simonyi Professorship for the Public Understanding of Science at the University of Oxford, whose holder is expected to 'share the excitement and awe that scientists feel when confronting the greatest riddles.' (Dawkins 2015, 279) Second, Dawkins is the most celebrated figure of the 'New Atheists', and makes no secret of his aversion to any form of religion in his writings. In 2006, he wrote and hosted a two-part documentary entitled "The Root of All Evil?" for British television' Channel 4. Dawkins continued the frontal attack on the monotheistic religions in his bestseller *The God Delusion* (GD), which appeared in the same year. Third, there is little analytical literature on Dawkins, and so far, there has been largely no reaction, especially from academic philosophy. (Langthaler and Appel 2010; Grafen and Ridley 2006; McGrath 2015; Keogh 2014; Sandrier 2008) Fourth, Dawkins's first goal is to influence the general opinion of society. Although the public interest of Western society⁸ in his writings decreased (see figure 2b)

⁸ The following map (figure 2a) shows the public interest for Dawkins's writings according to regions. We can clearly see his main influence especially in the so-called *Western world*, which was deeply influenced by the ideas of the Enlightenment, clearest articulated during the 18th century. (Pinker 2018, 29)



figure 2a)

continuously after the publication of his second bestseller GD⁹ (Trends 2019), he sold millions of copies of his books¹⁰ and still represents in an emblematic and clear way how CS's concept arose in the 21st century.

The study of the existing sources is multifarious and covers a wide range of publication channels. Dawkins uses all forms of media the modern world offers – books, blogs, films, audio books, social media etc. My main focus, however, lies on *The Selfish Gene* and the GD, his most famous and bestselling books, which cover important topics with regard to the subject of this thesis. For *The Selfish Gene* (SG), I use the 30th anniversary edition from the year 2006 because it is the last edition where Dawkins added a new foreword with some clarifying comments on this book.¹¹ For GD, I use the original version of 2006.

0.5. MY METHODOLOGICAL APPROACH TO COMPREHENSIVE SCIENTISM

In contrast to the aforementioned three different approaches to scientism, I take a more interrelated approach to the topic by using the first and the third approach of section 0.3. I think that one can only speak of a worldview if its statements are analysed in a systematic way. Therefore, my methodological approach to CS is based upon the analytical framework offered by Stenmark (1997) – who identified different forms of scientism and its rivals – and on Rik Peels's¹² (2018) analysis of their logical relations and deeper

⁹ This diagram (figure 2b) about the public interest according to chronological sequence shows the continuous decline of interest in Richard Dawkins writings in general since its peak in 2006, when he published his bestseller *The God Delusion*.



figure 2b)

¹⁰ In 2015, Dawkins claimed that he sold more than three million copies of *The God Delusion*. (Dawkins 2015, 173)

¹¹ Dawkins even reprinted the Introduction of his 30th anniversary edition in 2021, which underlines that he did not change his mind about the main aspects of his theory since the first publication in 1975. (Dawkins 2021a, 90-102) He writes: 'I would mind more if I could claim that *The Selfish Gene* had become seriously outmoded and superseded. Unfortunately (from one point of view) I cannot. Details have changed and factual examples burgeoned mightily. But, with an exception that I shall discuss in a moment, there is little in the book that I would rush to take back now, or apologize for.' (91)

¹² Rik Peels is an Associate Professor in the Philosophy Department and the Beliefs & Practices Department. His main research topic is the ethics of belief. He has developed a theory of responsible belief,